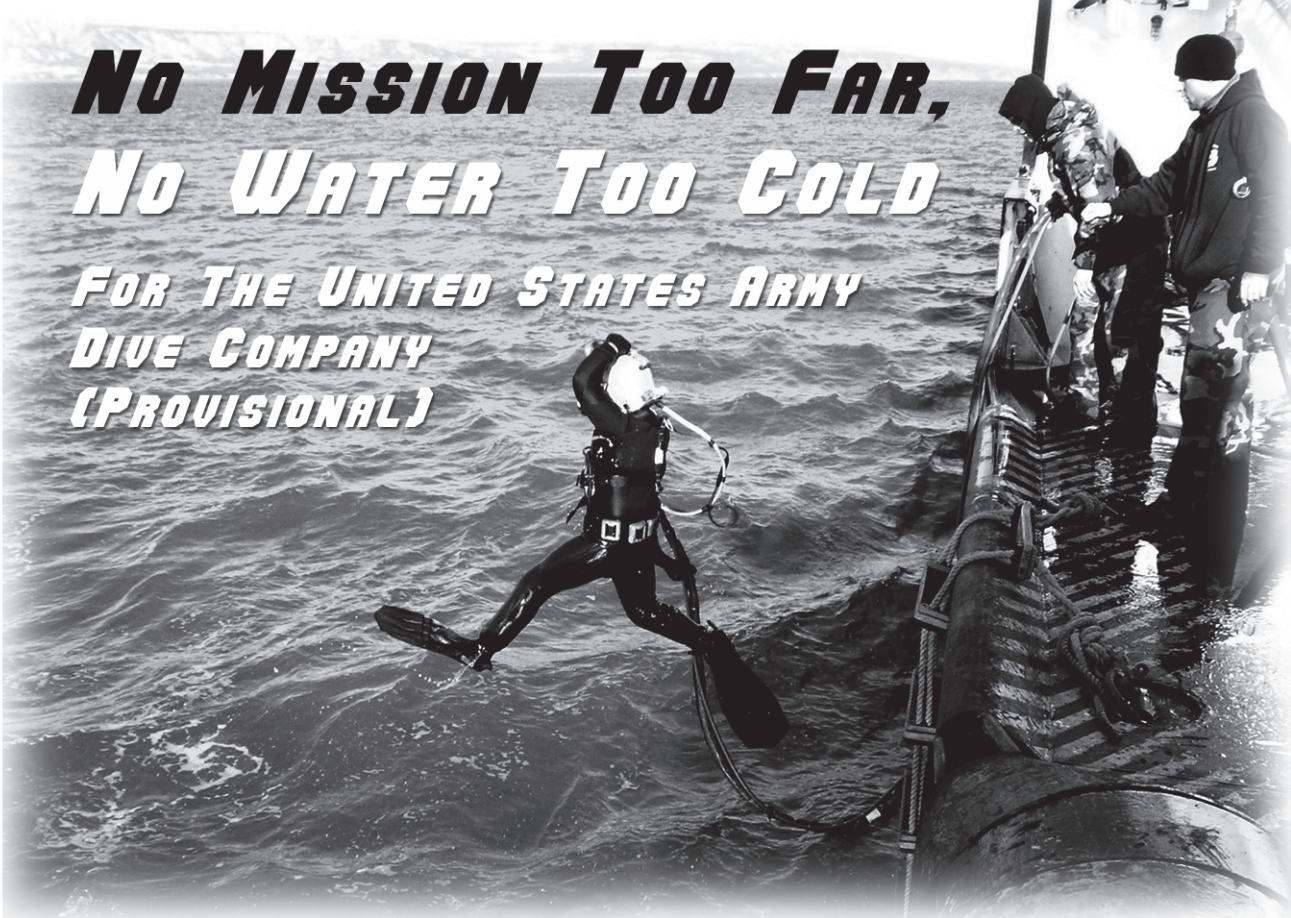


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# **No MISSION TOO FAR, No WATER Too COLD**

## **FOR THE UNITED STATES ARMY DIVE COMPANY (PROVISIONAL)**



By Sergeant Tyler Dodd and First Lieutenant Timothy Mitroka

**I**t was 0345 on 23 February 2006 when two divers from the 86th Engineer Team (Dive) (based out of Fort Eustis, Virginia) departed in a 26-foot moving truck packed with scuba and surface-supplied diving equipment for a cross-country trip to Astoria, Oregon. The two reached their destination after four days of driving and met up with seven other divers from the 86th Engineer Team (Dive) who flew in the day before. The team was on a mission in support of the Mid-Atlantic Regional Maintenance Center to inspect the hull of a United States Coast Guard vessel called the *Fir*, a 225-foot seagoing buoy tender.

The air temperature was cold and the water temperature even colder, topping off around 40 degrees Fahrenheit. For the next five days, the divers had to overcome less than optimal diving conditions to complete the job. Work consisted of removing, cleaning, and replacing metal grates on the vessel's hull (which weighed 70 to 80 pounds); inspecting the entire hull and running gear (which consisted of the propellers, shafts, and stave bearings) for any damage; documenting specific areas of the hull with underwater video and photography; and conducting a paint thickness analysis along the entire hull. The team spent nearly 75 hours working underwater to complete the job. The low visibility underwater increased the difficulty level, but the cold water was the limiting factor of each dive evolution. On average, the most a diver spent in the water at one time was around 90 minutes.



A diver is unhatted after conducting a dive in the cold water surrounding the *Fir* in Astoria, Oregon.



Divers inspect the water around the *Hickory* before jumping in to conduct a hull inspection.

By 4 March, the work was completed on the *Fir*. But a similar Coast Guard vessel, the *Hickory*, was docked 2,700 miles away in Homer, Alaska. The *Hickory* was scheduled to have the same hull inspection. This time, all nine divers spent four days driving north through Washington, Canada, and Alaska. Once they arrived on the jobsite, they were faced with working in 26- to 28-degree-Fahrenheit water with small ice sheets floating nearby.

To combat the effects of the freezing water, one of the divers put his engineering skills to work and devised a system that would pump hot water into their wet suits. Using a garden hose, plumbing fittings, and aquarium tubing, the divers were supplied with a constant flow of hot water—pumped from the vessel’s water supply—to surround their entire body while they worked in the cold water. This invaluable system allowed the divers to double, even triple, the average time they had spent underwater while in Astoria. One of the divers spent a total of 410 minutes in the water during one working dive.

When inspecting the *Hickory*, the team supervisors implemented lessons learned from the work they did on the *Fir*. The divers also knew exactly what needed to be done and how to do it more efficiently the second time around. The knowledge gained, combined with the newly implemented work strategies, greatly reduced the total time required to complete the mission. It took the divers only 30 hours of combined diving time to complete the hull inspection on the *Hickory*.

The scenery surrounding the bay was one of a kind, from the snow-covered mountains to the dozens of bald eagles flying around the area. Having the opportunity to dive in Alaska is a once-in-a-lifetime opportunity for most divers, but for one dive supervisor, it was the second trip to Alaska for a dive mission, and he was able to take what he learned from diving in cold water and share it with the rest of the team.

This type of work is fairly routine for Army divers. These missions reinforced the team’s ability to work underwater (particularly the ships husbandry aspect), but more importantly, it reinforced the importance of working relationships with other services and agencies—not only the Coast Guard but also the Navy, Marines, Air Force, and any other government agency having a need for divers, both stateside and overseas.

*Sergeant Dodd is a team leader/lead diver (salvage diver) with the United States Army Dive Company (Provisional)—86th Engineer Team (Dive). Previous assignments include Delta Company, 577th Engineer Battalion, Panama City Beach, Florida (Second-Class Diver School), and he has 3 1/2 years experience as an Army diver.*

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